REMARKS

Applicants request reconsideration of the subject application in view of the foregoing amendments and the following remarks.

The foregoing amendments are believed to place the application into condition for allowance, or at least in better form for appeal. The amendments were not earlier presented because Applicants earnestly believed the claims to be allowable in their earlier form. Accordingly, Applicants request entry and consideration of the amendments.

Claims 2-13, 16-22 and 71-75 are pending, of which claims 21 and 22 have been withdrawn. Claims 14 and 66-70 have been canceled. Claims 2, 4, 11, 13, 16 and 71-75 are independent and are amended herein to even more clearly define the invention in a manner that distinguishes over the art.

Restriction Requirement

Applicants confirm the provisional election with traverse of Species I, claims 2-14, 16-20 and 66-75.

Formal Rejections

Claims 11, 68 and 73 stand rejected under 35 USC §112, second paragraph, as allegedly being indefinite. Although Applicants believe that these claims, as previously presented, were sufficiently clear, Applicants have amended the claims as suggested by the Examiner in order to expedite prosecution. Withdrawal of the rejection is respectfully requested.

Anticipation Rejections

Claims 2, 5-14, 16-20, 66 and 68-70 stand rejected under 35 USC §102(b) as allegedly being anticipated by JP 49-20811 B1 (JP '811). Claims 2, 5-11, 13, 14, 16, 18-20, 66 and 68-70 stand rejected under §102(b) as allegedly being anticipated by SU 505 764 A (SU '764). Claims 2, 5-10, 13, 14, 16, 18-20, 66, 69-71, 74 and 75 stand rejected under § 102(b) as allegedly being anticipated by GB 2 162 283 A (GB '283). Claims 2-10, 13, 14, 16, 18-20, 66, 67, 69-72, 74 and 75 stand rejected under §102(b) as allegedly

being anticipated by GB 2 134 209 A (GB '209). These rejections are respectfully traversed, and reconsideration is requested.

Independent claims 2, 4, 11, 13 and 16 each recites a tension member, for providing lifting force to a car of an elevator system, which is engageable with a traction sheave. Independent claims 71-75 each recites an elevator system including a car, a traction sheave, and a tension member engaged with the car and engaged with and driven by the traction sheave. In claims 2 and 71, the tension member includes a plurality of load carrying ropes. In claims 4 and 72, the tension member includes strands of non-metallic material. In claims 11, 13, 16 and 73-75, the tension member includes a load-carrying member. In each of these claims, the tension member has an aspect ratio (width to thickness) of greater than one. In each of these claims, the tension member also includes a polyurethane coating (which in claims 2 and 71 maintains separation of the individual ropes and resists longitudinal movement of the ropes relative to one another) and an engagement surface that receives force from the traction sheave as a result of traction between the engagement surface and the traction sheave, which force is transmitted to the ropes/strands/load-carrying member of the tension member by the polyurethane coating to thereby move the car, the engagement surface is defined on the polyurethane coating substantially by the width dimension of the tension member.

None of the cited documents is understood to disclose or suggest at least the feature recited in each of the independent claims regarding a polyurethane coating. Rather, JP '811 discloses rubber or synthetic resin, SU '764 discloses an elastic sheath, and GB '209 recites a rubber or rubber-like material (such as artificial rubber or PVC). GB '283 refers primarily to GB '209 for the properties of the rope, but refers to an elastomeric material and to a resilient rubber-like covering. As noted at page 6, line 28 through page 7, line 6 of the current specification, the material of the coating must have specific functionality related to traction, wear, load transmission, and environmental resistance.

In addition to the above-noted claim features, JP '811 also does not appear to disclose or suggest at least the feature recited in recited in each independent claim regarding an engagement surface--defined on the polyurethane coating--that receives force from the traction sheave as a result of traction between the engagement surface and

the traction sheave, which force is transmitted to the ropes/strands/load-carrying member by the polyurethane coating to thereby move the car. Although the translation of JP '811 does make a single reference to using "ribbon-form" rope as "hoisting rope," it is unclear what the latter term means. The remainder of the document discusses the rope as a balance rope for use in elevators. Even assuming the rope is intended for load-bearing during "hoisting," there is no indication or suggestion that the rope would be capable of doing so via traction, e.g., would have the required traction, wear, and load transmission characteristics.

The abstract of SU '764 does refer to a drive pulley over which the ropes run. However, the disclosed elastic sheath apparently fails to maintain the relative position of the individual ropes, and transverse plates with guides are employed for that purpose. Apparently any load on the elastic sheath would be transferred to the transverse plates rather than the ropes. Thus, in addition to the above-noted feature, SU '764 apparently fails to disclose or suggest the feature recited in independent claim 2 regarding a coating that maintains separation of the individual ropes and resists longitudinal movement of the ropes relative to one another, and the feature recited in each independent claim regarding the polyurethane coating transmitting the force to the ropes/strands/load-carrying member by to thereby move the car.

According to Applicants' understanding GB '283 is not clear as to whether it relates a traction drive or to a drum drive winding machine. For example, at page 2, lines 54-59, GB '283 recites that the rubber-like covering retains the original grease in the rope. Such an arrangement is believed to be antithetical to traction drives because it would destroy the torque capability between the covering and the rope. Thus, whereas in the claimed invention traction between the sheave and the tension member moves the car, the arrangement in GB '283 would appear to require the end of the elevator-suspending rope be affixed to a drum on which the rope is wound, perhaps with a similar counterweight-suspending rope unwinding simultaneously for load balancing. Thus, GB '283 appears not to disclose or suggest the claimed features that relate to traction between the sheave and tension member moving the car and counterweight.

GB '209, on the other hand, discloses that the rubber-like material is molded with teeth (page 1, line 82) that cooperate with teeth of the drive wheel. Thus, whereas in the

claimed invention traction between the sheave and the tension member moves the car, in GB '209 it appears to be the positive engagement between the teeth of the rope and the teeth of the drive wheel. Incidentally, a positive engagement arrangement could cause the car or counterweight to not break traction when the car or counterweight is at the top of the hoistway and possibly be pulled into the overhead of the hoistway.

Therefore, each of the cited documents fails to disclose or suggest salient features recited in each of the independent claims. Accordingly, Applicants request withdrawal of each of the rejections of the independent claims based on §102.

Obviousness Rejections

Claims 3, 4, 67 and 72 stand rejected under 35 USC §103(a) as allegedly being unpatentable over GB '283 in view of either of U.S. Patent Nos. 4,022,010 (Gladenbeck et al.) and 4,624,097 (Wilcox). Claims 3, 4 and 67 stand rejected under §103(a) as allegedly being unpatentable over JP '811 in view of either Gladenbeck et al. or Wilcox. Claims 3, 4 and 67 stand rejected under §103(a) as allegedly being unpatentable over SU '764 or GB '283 in view of either Gladenbeck et al. or Wilcox. These rejections are respectfully traversed, and reconsideration is requested.

Neither Gladenbeck et al. nor Wilcox, which were cited for their disclosures regarding non-metallic strands, is read to overcome the above-noted deficiencies in the disclosures of JP '811, SU '764, GB '209 or GB '283. Neither appears to relate to a traction-drive elevator system, and neither suggests suitability for such a system, e.g., the required traction, wear, and load transmission characteristics. Rather, Gladenbeck et al. refers to rope storing and take-up drums (col. 3, line 45 and col.4, line 7), and Wilcox refers to ropes "to move such things as elevator cars, elements of cranes, drag lines and the like" (col. 1, line 8), apparently also relating to winding-drum mechanisms. Accordingly, although each refers to a polyurethane jacket, neither discloses or suggests the features set forth in each independent claim regarding an engagement surface--defined on the polyurethane coating--that receives force from the traction sheave as a result of traction between the engagement surface and the traction sheave, which force is transmitted to the ropes/strands/load-carrying member by the polyurethane coating to thereby move the car. Still further, neither discloses or suggests that the jacket maintains

separation of the individual ropes and resists longitudinal motion of ropes relative to one another, in the manner set forth in claim 2. Therefore, even when the disclosures of these documents are considered in combination in the asserted manners, salient features of the claimed invention are not disclosed or suggested.

Claim 72 stands rejected under §103(a) as allegedly being unpatentable over any one of GB 211 512 A (GB '512) or U.S. Patent Nos. 5,429,211 (Aulanko et al.) or 5,792,294 (Randazzo et al.), in view of JP '811 and further in view of either Gladenbeck et al. or Wilcox. This rejection is respectfully traversed, and reconsideration is requested.

GB '512, Aulanko et al. and Randazzo et al. are cited for their general disclosures of multi-rope traction-drive elevator systems. However, none of these documents is read to disclose at least the above-noted features recited in each of claims 71-75 relating to a polyurethane coating or an engagement surface--defined on the polyurethane coating-- that receives force from the traction sheave as a result of traction between the engagement surface and the traction sheave, which force is transmitted to the ropes/strands/load-carrying member by the polyurethane coating to thereby move the car. The deficiencies relative to these features in the disclosures of JP '811, Gladenbeck et al. and Wilcox. are discussed above. Therefore, even when the disclosures of these documents are considered in combination in the asserted manners, salient features of the claimed invention are not disclosed or suggested.

Claims 70, 71 and 73-75 stand rejected under §103 (a) as being unpatentable over GB 2 127 934 A (GB '934) in view of JP '811. This rejection is respectfully traversed, and reconsideration is requested.

GB '934 is cited as disclosing a contoured traction sheave. However, this document is not read to disclose at least the above-noted features recited in each of claims 71-75 relating to a polyurethane coating or an engagement surface--defined on the polyurethane coating--that receives force from the traction sheave as a result of traction between the engagement surface and the traction sheave, which force is transmitted to the ropes/strands/load-carrying member by the polyurethane coating to thereby move the car. The deficiencies relative to these features in the disclosure of JP '811 are discussed above. Therefore, even when the disclosures of these documents are considered in

combination in the asserted manners, salient features of the claimed invention are not disclosed or suggested.

Accordingly, Applicants request withdrawal of each of the rejections of the independent claims based on §103.

The dependent claims recite features in addition to those set forth in the various independent claims, and are submitted to be allowable for the foregoing reasons and in their own right. Further independent consideration of the dependent claims is requested.

Applicants submit this application to be in condition for allowance and request a notice thereof.

Please charge any additional fees or credit overpayment to Deposit Account No. 15-0750, Order No. OT-4190.

Respectfully submitted,

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